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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,479	09/24/2003	Steven G. Goebel	GP-303584	3973

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EXAMINER

HODGE, ROBERT W

ART UNIT

PAPER NUMBER

1746

DATE MAILED: 07/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/669,479

Applicant(s)

GOEBEL ET AL.

Examiner

Robert Hodge

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 13-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 40 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 28. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

### ***Claim Language***

2. It is noted that for the examination of the present application the terms pitch and wiggle will be defined as follows: pitch is any angle that a channel in the flow field makes or takes whether it be horizontal or vertical and wiggle is any sinusoidal or similar type pattern used for the channels in the flow field. These terms are construed in this manner because applicants' definition albeit present is quite broad, and therefore can read on almost anything. So for clarity purposes these terms are now defined more specifically, albeit still somewhat broadly.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 30 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant

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regards as the invention. Where pitch is defined as an angle, applicants are attempting to measure the angle with a unit of measure consistently used for measuring length not angles, therefore it is unclear how the pitch can be 2.5 mm or less since the accepted standard of measuring angles is degrees.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 13-22, 26-28, 30, 31, 33, 35-37 and 40-42 are rejected under 35 U.S.C. 102(b) as being anticipated by Gurau et al. WO 02/037592 hereinafter Gurau et al.

7. Gurau et al. teaches a proton exchange membrane fuel cell comprising membrane electrode assemblies which have two field flow plates having a plurality of channels wherein the channels are designed to be varied in shape and pattern, where the channels can be different sizes, and cross sectional areas and would therefore have varying land-to-land contact across the membrane, and it is the examiners position that because of the similar structure disclosed in the Gurau et al. reference that said contact across the membrane would be about 30% (abstract, figures 1-4, pages 1, 2, 4, 5, 7 and 9)

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8. Claims 13, 23-25, 29, 30-32 and 34 rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki et al. U.S. Pre-Grant Publication No. 2002/0004158 hereinafter Suzuki et al.

9. Suzuki et al. teaches a proton exchange membrane fuel cell for an automobile comprising membrane electrode assemblies which have two field flow plates having a plurality of channels wherein the channels are designed to be varied in shape and pattern, where the channels can be different sizes, and cross sectional areas that have the same specific dimensions as those claimed in the present application, as well the same angles of the pitch (paragraphs [0002], [0023]-[0026], [0056]-[0059], [0063], [0066]-[0070], [0078]-[0079] and [0084]).

10. Claims 13, 23-25, 29, 31, 32, 38 and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Wilkinson et al. U.S. Pre-Grant Publication No. 2001/0041281 hereinafter Wilkinson et al.

11. Wilkinson et al. teaches a proton exchange membrane fuel cell for an automobile comprising membrane electrode assemblies which have two field flow plates having a plurality of channels wherein the channels are designed to be varied in shape and pattern, where the channels can be different sizes, and cross sectional areas that have the same specific dimensions as those claimed in the present application as well as having a sinusoidal shape that can be in phase or out of phase (abstract, paragraphs [0003], [0007], [0015], [0016], [0028]-[0030], [0035], [0036], [0041], and claims 6, 7 and 11).

***Election/Restrictions***

12. Applicant's election with traverse of claim group II and the cancellation of claims 1-12 in the reply filed on 5/26/05 is acknowledged. The traversal is on the ground(s) that the inventions are not independent. This is not found persuasive because applicants admit that the inventions are distinct and the examiner has already shown that the inventions are independent in the previous restriction requirement "The subcombination has separate utility such as being used in electrolyzers for fluid flow management". Therefore by the legal authority under 35 USC 121 (Not the MPEP) the restriction requirement is still deemed proper and is therefore made FINAL.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Hodge whose telephone number is (571) 272-2097. The examiner can normally be reached on 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RWH 6-28-05

**MICHAEL BARR**  
**SUPERVISORY PATENT EXAMINER**

A handwritten signature in black ink, appearing to read 'Michael Barr', with a long horizontal flourish extending to the right.